



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/627,166

07/25/2003

Charles E. Price

946478.263692

2507

24239 7590 12/14/2009
MOORE & VAN ALLEN PLLC
P.O. BOX 13706
Research Triangle Park, NC 27709

EXAMINER

MARCANTONI, PAUL D

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

12/14/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/627,166
Filing Date: July 25, 2003
Appellant(s): PRICE, CHARLES E.

Henry B. Ward III
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/24/09 appealing from the Office action mailed 7/24/08.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,772,751	Nisnevich	6-1998
5,328,507	Crocker	7-1994

SIGMA-ALDRICH Particle Size Conversion Table (Date Unknown) Found on internet www.sigmaaldrich.com/chemistry for purposes of converting mesh to inches.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

35 USC 102/103:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,5,6,26,27,33,34,36,37 and 39-41 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nisnevich or Crocker.

Nisnevich et al. teach a composition comprising cement and bottom ash (see claims 1 and 5 in col.18) thus anticipating the instantly claimed invention. Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art. Note that Nisnevich even teaches a strength as high as 8.5 MPa or 1233 psi in Table II in column 6. Further, the use of a container or package or bag is standard and conventional as a means for holding the cement/aggregate (bottom ash) product.

Art Unit: 1793

Crocker teaches packaging or bagging a mixture of aggregate (similar aggregate includes ash materials such as fly ash or bottom ash because they are conventional in art as is sand for cement/concrete) wherein the container and composition together weight nor more than about 100 ppcf (See col.8, lines 25-40 and especially lines 35-40). Crocker teaches particle size of 1-100 microns (100 microns=.0039 inches) thus overlapping appellant particle size range for bottom ash (see col.6, lines 14-15).

35 USC 103:

Claims 1,5,6,26,27,33,34,36,37 and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nisnevich alone or in view of Crocker.

Nisnevich teaches a cementitious product comprising bottom ash in portions that overlap appellant's instant claims (see claims 1, 5, and 8 in col.18). It is the examiner's position that the use of a package such as a plastic container or standard size bag would be conventional and would have been an obvious design choice for one of ordinary skill in the art. Even if it were not, Crocker teaches the same package or container as claimed by appellant for their instant invention and thus the use of this particular package, for example, in the Nisnevich cement/aggregate composition, would have been an obvious design choice for one of ordinary skill in the art. Crocker teaches packaging or bagging a mixture of aggregate (similar aggregate includes ash materials such as fly ash or bottom ash because they are conventional in art as is sand for cement/concrete) wherein the container and composition together weight nor more than about 100 ppcf (See col.8, lines 25-40 and especially lines 35-40). Nisnevich also

Art Unit: 1793

teaches that the ash he uses must pass a 100 mesh screen (0.0059 inches) thus meeting appellant limitation of bottom ash of particle size less than about .012 inches.

(10) Response to Argument

The examiner provided portions of his arguments from his 9/26/07 office action which generalizes and summarizes the points of argument and disagreement between appellant and examiner as well as additional responses to those in the 6/24/09 appeal brief. The appellant did repeat some arguments stated previously and the examiner has provided his summary of rebuttal.

The examiner maintains that both first portion and second portion particle sizes for bottom ash as claimed by appellant (e.g. see claim 1) overlap and thus it cannot be clarified which particles falls into which portion.

The appellant argues the specific particle distribution and amounts of fly ash for each portion of particle size. Yet, even if particle sizes of the prior art do not overlap appellant's claims, it is the examiner's position that control of particle size would have been an obvious design choice absent a showing of criticality or unexpected results. Absent this showing, the prima facie case of obviousness has not been overcome.

The appellant also argues that the prior art does not teach mixing the first and second portions together. In rebuttal, the prior art teaches an overlap of both appellant's first and second portion bottom ash particle size so their would be an mixing together of these portions or particle sizes. Again, appellant fails to distinguish one portion from the other because the portions' particle sizes overlap. Also, appellant has yet to show

Art Unit: 1793

criticality or unexpected results for their specific particle sizes/portions. The prior art still teaches amounts of bottom ash and cement that do overlap.

The appellant also argue extra additives in the prior art such as silica fume, fly ash, expanded polystyrene, blast furnace slag, other adjuvants, fillers, etc. The appellant is reminded, however, that they use *comprising* claim language. *Comprising* leaves the claim open for the inclusion of unspecified ingredients even in major amounts. Ex parte Davis et al., 80 USPQ 448 (PTO Bd of App.1948).

The prior art is not required to teach the exact particle size range of each portion either. The prior art overlaps applicants' ranges and thus meets their claim limitations. Again, even if the particle size were not the same, the appellant has not shown criticality or unexpected results for properties such as compressive strength for their claimed composition. The appellant now in their appeal brief has provided nearly *fifty* pages of argument to rejections encompassing only *two* references.

Nevertheless, the examiner has responded in his recitation of the limitations within the teaching of the prior art and his response above and wishes to keep it concise and simple as possible. The examiner notes that his rejections are not so complex as to require that length of response yet the references do teach amounts of components and particle sizes. Nevertheless, the disagreement boils down to whether Nisnevich and/or Crocker teach each and every element of the claimed invention and each component. The examiner maintains that both Nisnevich and Crocker teach the same components (bottom ash and Portland cement) in overlapping amounts and even teach within appellant's claimed particle size range as stated above. Any properties such as

Art Unit: 1793

compressive strength would thus have been expected to be the same because the prior art teaches the same components in overlapping amounts as well as as particle sizes.

The appellant argues that Nisnevich teaches that it is not advisable and practically substantially impossible to use bottom ash for his invention and it is *preferred* to use fly ash. In rebuttal, a reference is good for all that it realistically teaches and Nisnevich does not teach that he can not and must not use bottom ash. Bottom ash is still listed as a choice for aggregate and the examiner cannot ignore the teaching of the reference saying so.

The appellant also alleges unexpected results with respect to compressive strength being five and a half times the compressive strength of Nisnevich (4000 psi vs 710 psi). Yet, the examiner has reviewed all of appellant's claims and not one claim contains a specific amount for water (or any amount of water) which is critical to achieve that high compressive strength. How does one achieve any hydraulic activity to form a hardened high compressive strength article without water as the hydraulic activator? Cement does not set without water addition. It seems that appellant is merely claiming a mixture of powders of Portland cement and bottom ash that have no strength without water added. Further, appellant's claims have no specific range of amounts for coarse aggregate and fine aggregate (bottom ash sizes) which are critical to achieving their high compressive strengths. Appellant is referred to their own Figure 7A which teaches specific amounts of cement, *coarse aggregate bottom ash*, *fine aggregate bottom ash*, and *water*. The amount of coarse aggregate and fine aggregate in relation to one another and the total composition and the amount of water which is critical is missing in

Art Unit: 1793

all claims. Thus, appellant cannot rely on their compressive strength values as high as they are because their claims are not commensurate in scope with the missing critical components of the invention providing them those unexpected strength properties. Appellant cannot read the missing water and bottom ash (coarse and fine) components into the claim just because they are in the specification. Nisnevich still meets applicants' claims because they do not provide critical amounts of water and fine and coarse aggregate of bottom ash (again refer to Figure 7A or 8A). While it is true that the claims may be read in light of the specification, it is improper to read the limitations of the specification into the claims. In re Yamato, 222 USPQ 93; In re Wilson, 149 USPQ 523; Graver Tank v. Linde Air Products Co. 80 USPQ 451 (Supreme Court).

The appellant then states that the examiner has improperly *refused* to consider evidence of unexpected results located in the specification of the application. How can he consider unexpected results when the claims are devoid of the critical elements or components to provide such unexpected results such as compressive strength? In rebuttal, appellant should revisit what was just stated by the examiner. "While it is true that claims may be read in light of the specification, it is improper to read the limitations of the specification into the claims". Appellant totally ignores what the examiner is saying. Appellant cannot read missing limitations such as specific amounts of water and specific amounts of coarse bottom ash and specific amounts of bottom ash which are nowhere to be found in any claim and then claim their high compressive strength. The case law stated makes it clear that appellant cannot do so but needs to provide all critical amounts and limitations *in their claims*. The examiner is not refusing to consider

Art Unit: 1793

appellant's alleged unexpected results or evidence either. He is simply telling the appellant as he has done since early in prosecution that if you wish to claim unexpected results the scope of what is being claimed must be *commensurate* in scope with what is critical to achieve those unexpected results and all those components must be in the claim. How does one obtain appellant's compressive strength when the amount of water is not even provided that is critical?

The examiner disagrees that he has not properly provided a proper analysis required under 35 USC 102 and 103 as he has shown each and every element appears to be met in the prior art Nisnevich and Crocker references. He most certainly has done so. The appellant, however, has failed in their own analysis with respect to a proper complete providing of all necessary limitations in their claims by providing each and every component critical and necessary to obtain their high compressive strengths (e.g. water amounts and specific amounts of coarse bottom ash and fine bottom ash).

The examiner disagrees that he cannot make the statement that control of particle size is within the skill of one of ordinary skill in the art and thus within KSR guidelines. The whole point is that appellant has not shown that their particle size range is critical and leads to an unexpected result by modifying particle size. Partly the reason for that is that they provide no amount of water and the specific amount of coarse bottom ash aggregate and fine bottom ash aggregate anywhere in their pending claims. Nevertheless, the examiner notes that it is his position that the particle size ranges are met by the prior art Nisnevich and Crocker references as stated above.

Art Unit: 1793

The appellant argues that Nisnevich does not teach their claimed particle size for bottom ash since they are greater than 4.75 mm in size. Yet, appellant argues the preferred embodiments by stating so (see col.4, lines 32 and lines 35-40) and certainly a reference is good for all that it realistically teaches and is not limited to the preferred embodiments nor they examples. Please go down the same column 4, last line in Nisnevich to see the teaching that bottom ash must pass a 100 mesh screen which is 0.0059 inches; which is within appellant's claimed range for particle size of bottom ash.

It is the examiner's position he has fully responded to appellant's arguments.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Paul Marcantoni/
Primary Examiner, Art Unit 1793

Conferees:

/Jerry Lorengo/
SPE, Art Unit 1793

/Chris Fiorilla/
QA Specialist TC 1700